

**SUMMARY OF INTERNATIONAL ACTIVITIES RELATED TO REDUCTION OF BYCATCH  
OF SEA TURTLES IN LONGLINE FISHERIES** (last updated July 12, 2005)

DESCRIPTION OF ACTIVITY	LOCATION OF ACTIVITY - COUNTRY AND OCEAN (IF APPLICABLE)	LEAD FMC	CONTACT PERSON FOR ADDITIONAL INFORMATION
<b>A. Technology Transfer (Training and Outreach)</b>			
A.1 A Workshop was held in conjunction with the Sea Turtle Symposium in San Jose, Costa Rica on February 28, 2004. Focus was on providing information on safe release to participants from nations with longline fleets.	Potential to reach multiple longlining nations	SEFSC	John Mitchell Charlie Bergman
A.2 A workshop was held in Panama City, FL during March 2004 to provide instruction to domestic vessels in the Gulf on the use of de-hookers and line cutters.	U.S. Gulf	SEFSC	John Watson
A.3 Laminated cards with sea turtle ID and handling guidelines and the safe handling video developed by the SEFSC are being provided to numerous countries as requested. These materials were used in training sessions held in Ecuador in collaboration with IATTC and WWF in March 2004. Safe handling video and guidelines have been translated into Spanish and Vietnamese.	Pacific Atlantic	SEFSC PIFSC	Sheryan Epperly Yonat Swimmer
A.4 Staff followed up on requests for technical information and materials that have been received from Mexico, Israel, and Australia.	Pacific Atlantic	SEFSC PIFSC	All involved staff
A.5 SEFSC staff conducted longline mitigation training and workshops in Peru, June 1-12, 2004 in cooperation with IATTC (Martin Hall).	Peru	SEFSC	Charlie Bergmann

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A.6 As a follow up to the workshop held at the Sea Turtle Symposium in Costa Rica, a workshop on the use of dehookers, safe handling and release techniques was held with the crew of the Marviva, the Coast Guard, INCOPECA, sport fishers and NGOs in Golfito, CR in July 2004. The focus was on the sportfishing community, but workshops are planned for early 2005 to target shark and mahi longline fleets.	Costa Rica	SEFSC	Charlie Bergmann
A.7 Workshops were held to help domestic fishers comply with the recent HMS BiOp. Workshops covered results from the NED, safe handling, gear removal and release. Workshops were held in Dulac, LA, Larose, LA, and Panama City, FL in July 2004. An enforcement workshop was also held at the USCG training facility in New Orleans on August 11. Workshops were held in Pompano Beach, FL, Ft. Pierce, FL, Charleston, SC, and Wanchese, NC in August and in Barnegat Light, NJ and East Setauket, NY in September 2004. Similar workshops were held by PIRO for Hawaii-based longline fishermen in September 2004 and will be held quarterly thereafter.	U.S. Gulf and Atlantic U.S. Hawaii	SEFSC PIRO	Charlie Bergmann Charles Karnella
A.8 As a follow up to the workshop held at the Sea Turtle Symposium in Costa Rica in 2004, dehookers are being tested on Uruguayan vessels. In response to a March 22, 2004 email from Martin Laporta (Uruguayan fisheries observer), a Careful Handling and Release Kit has been provided for field testing.	Uruguay	SEFSC	John Watson
A.9 In August 2004 a workshop was held in Panama on conducting circle hook experiments similar to Ecuador and on the use of dehookers and safe handling and release techniques.	Panama	SEFSC	Charlie Bergmann

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A.10 In August 2004 a workshop was held in Guatemala on conducting circle hook experiments similar to Ecuador and on the use of dehookers, safe handling and release techniques.	Guatemala	SEFSC SWFSC	Charlie Bergmann Chris Boggs
A.11 In October 2004 SWFSC staff followed up on a training workshop held in 2003 in cooperation with IMARPE for fisheries observers, by working with Peruvian researchers to initiate circle hook implementation and experiments in the artisanal mahi and shark fisheries.	Peru	SWFSC	Peter Dutton
A.12 The PIFSC has been involved in training Korean and Japanese representatives to train their own fisheries observers in protocols utilized by NMFS observers.	Korean and Japanese fleets	PIRO	Charles Karnella
A.13 The PIRO is following up on requests for safe handling workshops from the Federated States of Micronesia, Papua New Guinea and the Marshall Islands.	FSM, PNG, Marshall Islands	PIRO	Charles Karnella
A.14 At the Annual ICCAT meeting in New Orleans Nov 15-21 NMFS staff conducted a workshop on experimental results and the use of circle hooks; the use of dehookers; and safe handling and release techniques.	Atlantic	SEFSC	Charlie Bergmann
A.15 In November 2004 a workshop was conducted at the meeting of the Gulf and Caribbean Fisheries Institute in St. Petersburg, Fl.	Atlantic/Caribbean	SEFSC	Charlie Bergmann
A.16 In response to a September 23, 2004 email received by R. Lent, SEFSC staff provided information on circle hook producers to Julia Hsiang-Wen Huang, a specialist with the Taiwanese Fisheries Agency.	Taiwan	SEFSC	Charlie Bergmann

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A.17 At the FAO Technical Consultation held in Bangkok Nov-Dec 2004 staff handed out over 100 copies of the SEFSC and PIC safe turtle handling and release protocols and received many request for copies of the videos.	Potential to reach multiple longlining nations	SEFSC PIFSC	John Watson Chris Boggs
A.18 At the FAO Technical Consultation held in Bangkok Nov-Dec 2004 there was a request from Elisabeth McLellan of WWF International (Australia) for the Atlantic longline research experimental design, data sheets, and instructions to assist in planning experiments in countries interested in evaluating circle hooks. There was also a request for a sample of 18/0 circle hooks for evaluation by an Australian fisher.	Australia	SEFSC	John Watson
A.19 Sea turtle safe handling and release training workshops were held in New Orleans, LA on February 11, 2005 and in Orlando, FL on April 8, 2005.	U.S. Gulf and Atlantic	SEFSC	Charlie Bergmann
A.20 In a letter received via fax, as a follow up to the Bangkok FAO meeting, Malcolm Sarmiento of the Philippines Dept. of Agr/Bureau of Fisheries and Aquatic Resources requested assistance with circle hook experiments. Representatives participated in the Technical Assistance Workshop (see A 23).	Philippines	PIFSC	Chris Boggs

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A.21	A safe turtle handling and release certification training workshop was held for 46 pelagic longline fishers in Orlando, Florida on April 8th, 2005.	U.S. Atlantic and Gulf	SEFSC	Charlie Bergman
A.22	Safe turtle handling and release workshops were conducted in June 2005 for pelagic, shark bottom and reef longline fishers in: Galveston and Brownsville, TX; Venice and New Orleans, LA; Panama City, Madeira Beach, Key West, Cape Canaveral and Port Isabel, FL; Charleston, SC; and Manteo, NC.	U.S. Atlantic and Gulf	SEFSC	Charlie Bergman
A. 23	The first Technical Assistance Workshop on Sea Turtle Bycatch Reduction Experiments in Longline Fisheries was held April 11-12, 2005 in Honolulu. The workshop was held to provide technical assistance for participants from the FAO Technical Consultation to design programs for the development and testing of turtle bycatch reducing technology appropriate to the longline fisheries of participating nations.	Australia, Indonesia, Malaysia, Mexico, Philippine Islands (National Delegations)  Italy, New Caledonia, Papua New Guinea, Spain, Solomon Islands, U.S. and Vietnam (Participated)	PIFSC	Chris Boggs
<b>B. Gear Experiments (Field)</b>				
B.1	NMFS, in collaboration with WWF, IATTC, and the WPRFMC provided hooks, dehookers, and technical assistance to Ecuador for the testing of non-offset 14/o and 15o circle hooks in the mahi mahi fishery and 10 degree offset 16o and 18o circle hooks in the tuna/shark fisheries. Work began in March 2004. Initial results from the tuna/shark fishery indicate that the majority of the bycatch is entangled, not hooked. Four of the 17 turtles hooked so far were caught on 16o circle hooks, and none on 18/o.	Ecuador	SEFSC PIFSC	John Watson Chris Boggs Yonat Swimmer

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B.2 As of June 28, 2004 Peru had retrofitted two vessels with 16o and 18o circle hooks and is conducting work similar to Ecuador above.	Peru	SEFSC	Charlie Bergmann
B.3 1 Caribbean and 4 Gulf vessels will be testing an 18o, non offset circle hook vs the 16o circle hook typically used in the tuna fishery, with standard squid/herring/sardine bait. Evaluations of 18/0 circle hook in the GOM tuna directed fishery have been completed and a report has been submitted.	Gulf/Caribbean	SEFSC	John Watson
B.4 PIFSC staff are working cooperatively with the NGO PRETOMA to test effects of offset on circle hooks and blue bait in the Costa Rican tuna longline fishery.	Costa Rica	PIFSC	Yonat Swimmer
B.5 PIFSC assisted with experimental design for blue dyed bait in the shallow water mahi mahi fishery in Costa Rica. Initial testing in Nov 2003 was unsuccessful, and work has shifted to hook testing.	Costa Rica Brazil	PIFSC	Chris Boggs
B.6 Over the past 2 ½ years satellite tags have been provided to Costa Rican longline observers to investigate post-hooking survival. A total of 10 longline caught and 5 free-swimming turtles were tagged and monitored, with no apparent behavioral differences between the groups. As tagging becomes possible in the re-opened Hawaii swordfish fishery, tagging in Costa Rica is being phased out.	Costa Rica	PIFSC	Yonat Swimmer
B.7 In 2003 circle hooks were provided to approx. 10 swordfish vessels. An 18o circle hook with 10 degree offset will be tested during the 2004 fishing year.	Chile	SWRO SWC	Peter Dutton
B.8 In the fall of 2004 University of Florida researchers tested an 18o 10 degree offset circle hook baited with squid versus an 18o circle hook with no offset in the Azorean swordfish longline fishery.	Azores	PIFSC OPR	Chris Boggs Barbara Schroeder

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B. 9 A cooperative research project between the Fisheries Research Institute, NOAA Fisheries Service, College of William and Mary, University of California, University of Miami, and Aquatic Release Conservation was initiated in the Gulf of Mexico in April, 2005. The project is designed to investigate bycatch mitigation techniques in the coastal longline fishery in the Gulf of Mexico and Atlantic Ocean. The project will involve six cooperative commercial vessels which will make 200 research sets using hook timers and TDRs to investigate temporal and spatial relationships between target and bycatch species and will test circle hooks and baiting techniques to reduce mortality of bycatch species.	Atlantic and Gulf of Mexico	SEFSC	John Watson
B. 10 SEFSC staff are working cooperatively with VIMS to provide circle hooks to Brazil for a billfish bycatch reduction research initiative.	Brazil	SEFSC	John Watson
<b>C. Possible Future Gear Experiments</b>			
C.1 PIFSC staff will be analyzing results from the re-opened shallow set fishery in HI which will use only 10 degree offset 18o circle hooks and fish bait. PIFSC will also analyze results from several vessels in the deep-set tuna fishery which are voluntarily trying smaller circle hooks. Controlled (circle versus tuna hook) testing of non-offset 18o circle hooks will shift to the tuna fishery, in conjunction with action C.2 below.	HI	PIFSC	Chris Boggs
C.2 PIFSC staff has been consulting with WESPAC, Blue Ocean Institute, and Japan on a cooperative research design to test the efficiency of circle hooks in the Japanese tuna fishery. A draft research plan was reviewed in May 2004 and a meeting to refine the draft was held in Honolulu Sept 13-17, 2004.	Pacific	PIFSC	Chris Boggs

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C.3 PIFSC is actively continuing to seek platforms throughout Asia for the deployment of archival tags.	Pacific	PIFSC	Chris Boggs
C.4 PIFSC is collaborating with Projeto TAMAR and IBAMA to test 18o circle hooks vs. 9o J hooks and dyed bait in commercial and research vessels in the Brazilian swordfish fishery.	Brazil	PIFSC	Yonat Swimmer
C.5 Guatemala has expressed an interest in experimenting with circle hooks in their swordfish fishery. The dorado and shark targeting longline fishery will be supplied with non-offset 14/0 and 15/0 circle hooks for controlled comparison with other hook styles in use, during a week long visit to Guatemala August 14-21, 2004.	Guatemala	PIFSC	Chris Boggs
C.6 At the FAO Technical Consultation a request was received from Uruguay for assistance in setting up experiments to evaluate circle hooks. SEFSC staff will provide guidance and circle hooks for the experiments. 18/0 circle hooks were provided to Uruguay in January 2005 for evaluation on commercial vessels.	Uruguay	SEFSC	Charlie Bergmann
C.7 SEFSC staff have held preliminary discussions with Korea on a cooperative research project. As of May 2005 this project is still in the planning stages.	Korea	SEFSC	John Watson
<b>D. Gear Experiments (Laboratory)</b>			
D.1 Continued hook size experiments compared to turtle size were initiated in March 2004 with head started turtles in Galveston. PIFSC is providing funds. Preliminary results were presented at the 2005 Sea Turtle Symposium in Savannah, GA. Experiments will be completed when turtles reach 65-70 cm in spring 2005.	Galveston, TX	SEFSC PIFSC	Sheryan Epperly Chris Boggs John Watson



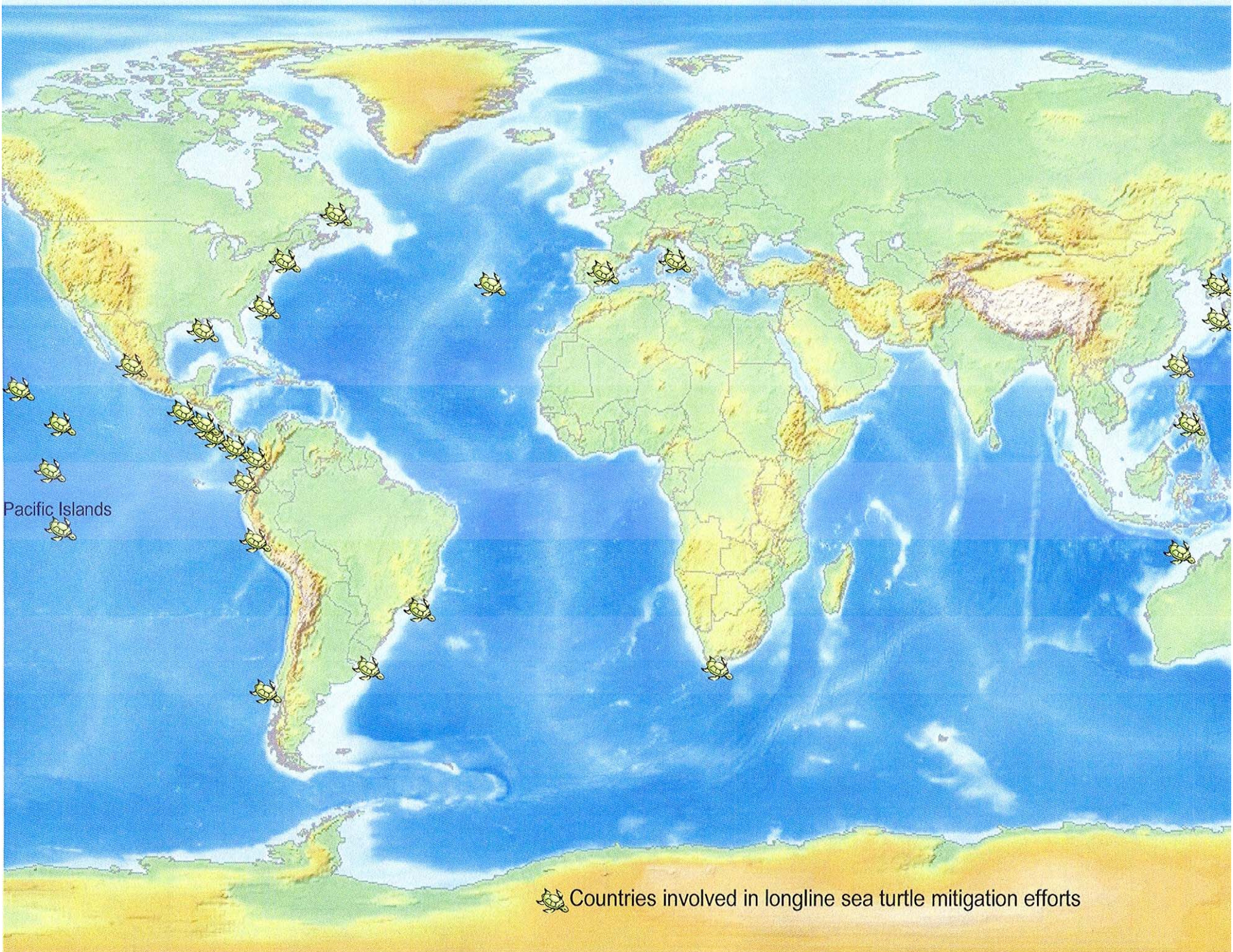
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D.2 Physiology and behavior experiments (olfactory and visual cues, etc.) are ongoing at PIFSC, Galveston and elsewhere. A meeting to summarize results was held at the 25 <sup>th</sup> Annual Symposium on Sea Turtle Biology and Conservation.	HI and various affiliated research institutions	PIFSC	Yonat Swimmer
D.3 In collaboration with Projeto TAMAR odor/repellant studies are being conducted with captive and semi-wild turtles that are also monitored for hook expulsion and post-hooking health over time.	Brazil	PIFSC	Yonat Swimmer
D.4 A meeting of the Sensory/Mechanical Turtle Longline Group will be held in Chapel Hill, NC May 20-21, 2005.	HI and various affiliated research institutions	PIFSC	Yonat Swimmer
<b>E. Bi- and Multi-Lateral Efforts</b>			
E.1 Research results from the NED experiments were presented at the IATTC Bycatch Working Group January 2004 Kobe, Japan. The Group examined information on status of sea turtles; identified short and long-term conservation measures; and recommended research areas to address sea turtle interactions in fisheries.	Member Countries: Costa Rica, Japan, Spain, Ecuador, Mexico, United States, El Salvador, Peru Nicaragua, Vanuatu, France, Panama, Venezuela, Guatemala	SEFSC PIFSC SWR	John Watson Tina Fahy
E.2 The March 2004 Bilateral with Mexico provided an opportunity to follow up on their request for longline technical assistance.	Mexico	SF/HQ	Dean Swanson
E.3 NMFS staff participated in the 2 <sup>nd</sup> WPRFMC Western Pacific Sea Turtle Cooperative Research and Management Workshop held in Honolulu, HI May 17-21.	Pacific	PIFSC PIRO SWFSC	Chris Boggs
E.4 Research results from the NED and Pacific longline gear experiments were presented at the World Fishery Congress, May 2-6, Vancouver, BC, Canada.	Global	PIFSC SEFSC	Yonat Swimmer John Watson

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E.5 An MOU has been developed between the SWFSC and IMARPE (Peru) to collaborate on sea turtle/fisheries research.	Peru	SWFSC	Peter Dutton
E.6 In June, 2004 the PIFSC hosted a representative of the Pacific Fisheries Section of the Deep Sea Fisheries Division of the Taiwanese Fisheries Agency. He participated in a WPFMC sea turtle workshop and a fisheries observer workshop held at the PIRO.	Taiwan	PIFSC	Yonat Swimmer
E.7 NMFS staff gave a presentation promoting cooperative research and the use of circle hooks at a Symposium on Bycatch Reduction hosted by NFRDI in Korea, June 7-11, 2004.	Pacific	PIFSC	Chris Boggs
E.8 The EU Fisheries Bilateral in Brussels, June 30-July 1, 2004 provided an opportunity to highlight sea turtle longline issues.	EU	HQ	Dean Swanson
E.9 The Fisheries Bilateral with Iceland in Reykjavik July 27-28, 2004 provided an opportunity to highlight sea turtle longline issues.	Iceland	HQ	Dean Swanson
E.10 The Fisheries Bilateral with Canada in Washington July 22 provided an opportunity to continue to engage Canada in sea turtle longline issues.	Canada	HQ	Dean Swanson
E.11 The Fisheries Bilateral with Chile in Juneau July 27-29, 2004 provided a forum to call attention to the cooperative circle hook research that is underway and to discuss possible expansion of that program.	Chile	SF/HQ SWFSC	Dean Swanson


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E.12 The ISC (Interim Scientific Committee for Tuna and Tuna-like Species in the North Pacific) has agreed to establish a working group to address sea turtle bycatch issues.	Member States: Canada, Chinese Taipei, Japan, Korea, Mexico, People's Republic China, United States	SF/HQ PIFSC	Dean Swanson Chris Boggs
E.13 An FAO Technical Consultation on the issue of sea turtle interactions with fishing gear was held November 29 - December 3, 2004 in Bangkok, Thailand.	Global	SF/HQ	Dean Swanson
E.14 The 4 <sup>th</sup> International Fisheries Observer Conference was held Nov 8-11, 2004 in Sydney, Australia. There was a NOAA Fisheries sponsored workshop prior to the Conference that focused on standardizing longline observer data collection and sampling protocols.	Global	ST/HQ	Therese Conant
E.15 NMFS staff gave a presentation promoting cooperative research and the use of circle hooks at a Symposium on Bycatch Reduction hosted by NFRDI in Korea, June 7-11, 2004.	Pacific	PIFSC	Chris Boggs
E.16 A meeting on longline fishing turtle bycatch mitigation field trials was hosted by NOAA, IATTC and WWF at the 25 <sup>th</sup> Annual Symposium on Sea Turtle Biology and Conservation.	Global	PIFSC	Yonat Swimmer
E.17 An MOU has been developed between NMFS and WWFUS to enhance recovery and conservation in the Pacific.	Pacific	PR/HQ	Barbara Schroeder
E.18 An agency meeting with Vietnam held in March 2005 provided an opportunity to highlight sea turtle longline issues.	Vietnam	PR/HQ	Dean Swanson
E.19 IFF3 will be held in Yokohama, Japan July 25-28, 2005	Global	WPRFMC	WPRFMC

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E. 20 A Fisheries Bilateral will be held with Canada in Ottawa on July 29, 2005, providing an opportunity to continue to engage Canada in sea turtle longline issues.	Canada	HQ	Dean Swanson
<b>F. Non U.S. Activities</b>			
F.1 Workshops on mitigation research, de-hooking, line cutting, handling techniques and data collection have been conducted with 41 fishers in Queensland and Western Australia. More workshops are planned. A handling video is under development.	Queensland and Western Australia, Australia	n/a	Carolyn Robins
F.2 Workshops with Columbian fishers on handling techniques and the use of circle hooks were conducted in July 2004.	Columbia	n/a	Martin Hall with WWF Columbia
F.3 A cable response to State 118401 contained information on longline effort out of Durban and the east coast of S. Africa as well as proposed mitigation measures, including dropper lines that are 2 meters longer than the depth of the buoy line and the potential use of non-stainless circle hooks.	South Africa	n/a	Jill Derderian
F.4 The National Research Institute of Far Seas Fisheries (NRIFSF) has tested non-offset 160 circle hooks in comparison to tuna hooks and found no difference in the rate of bycatch, and a substantial reduction in deep hooking with the circle hooks. Work with larger circle hooks is being planned (C2)	Japan	n/a	Hideki Nakano
F.5 With input from the SEFSC, the Organization for the Promotion of Responsible Tuna Fisheries (OPRT) in Tokyo Japan has developed pamphlets and a poster on sea turtle mitigation measures that will be distributed to Japanese fishers.	Japan	n/a	Yuichiro Harada





Pacific Islands

 Countries involved in longline sea turtle mitigation efforts